



# NUCLEAR DIVISION NEWS

UNION  
CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 1 — No. 23

OAK RIDGE, TENNESSEE

Thursday, December 17, 1970



**CHRISTMAS BUYERS**—A long line of potential Quintessa customers await their turn at the Holiday Inn last week. The Linde-created emeralds, as well as many natural gems, will brighten many Christmas stockings in this area. More than 500 employees purchased the jewels.



**MAY BIRTHSTONE**—The emerald is the birthstone for May, but is also a delicate gem preferred by a lot of women not born in May. Evelyn Bass (wife of Paul Bass) has no trouble making her selection at the recent Linde sales here in Oak Ridge. Tom Mariner is from the New York office.

## Atoms Attack Pollution

Small atoms are aiding in the attack on one of man's biggest problems—pollution. The scope of nuclear energy's role in the fight against pollution now includes helping the pulp and paper industry tackle the problem of stream pollution.

Utilizing a tracing technique developed by Washington State

University for the Atomic Energy Commission, environmental investigators "tag" small samples of wood chips taken from the paper-making process with metallic salts. The salts included are copper, silver, barium, lanthanum, gold and iridium. Iridium and lanthanum are favored because they rarely occur naturally in

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## Surplus Sale Set

Surplus property offered for early 1971 sale can be seen at the Oak Ridge Gaseous Diffusion Plant, Power House Area, Building K-722, between 8:10 a.m. and 4:10 p.m. Monday through Friday and on Saturdays, January 9 and 16 at the same times.

Offered for sale will be Chevrolet, Dodge, Ford, Studebaker cars, Reo and International trucks, White tractors, Dodge and Chevrolet Vans, carryalls, station wagons, GMC and Superior busses. Also boating and office equipment will be offered for sale.

The sale will start at 9 a.m., January 20.

Building K-722 is just off State Route 58.

Additional information may be obtained by calling 3-4601.

## Early Payday

Payday will arrive a little early for Union Carbide employees who are paid on a monthly basis. The Paymaster announces that employees who pick up their checks may do so Monday, December 21.

Employees who bank by mail will also have their checks mailed early.

Weekly and hourly paid employees will receive their checks next week on December 23.

Regular schedules will resume in January.

## 'Touch Hands . . . Touch Hands'

Gold, frankincense and myrrh were, of course, the first Christmas gifts, brought to the Babe in the Manger by the Wise Men from the East. Since the Child grew to manhood only to refuse such worldly riches, it is seemingly odd that the Scriptures would allude to the gifts the Magi brought.

Perhaps it was an 'outward sign of inner grace' after all . . . or the true gift the travelers from the East brought could very well have been love itself. Here was the cheapest, yet most valuable gift they could bestow.

This same gift lies within the reach of us all. This gift is the most needed in the world today. Ironically, it is the easiest one to give. Yet men withhold it as they would hoard gold. Edna St. Vincent Millay, the poet, once said, "Even as I speak, men are dying for lack of love alone."

A kind word, a gesture, a smile, a helping hand given in love can be the most priceless gift you give. By giving this to your fellow man, you bring gold, frankincense and myrrh to the Little Babe . . . for He Himself said, "Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me."

William H. H. Murray said it well in a little poem almost a hundred years ago.

"Ah, friends, dear friends, as years go on and heads get gray, how fast the guest do go!

Touch hands, touch hands, with those that stay.

Strong hands to weak, old hands to young, around the Christmas board touch hands.

The false forget, the foe forgive, for every guest will go and every fire burn low and cabin empty stand.

Forget, forgive, for who may say that Christmas day may ever come to host or guest again.

Touch hands!"

Have you 'touched hands' lately?

## 14 Additional Nuclear Power Plants

During the first three quarters of 1970, electric utilities made known plans for 14 nuclear power plants with a total capacity of 14,145,000 kilowatts. Reactor suppliers were selected for 13 of these plants and for one that was announced in 1967.

In the first three quarters of 1969, utilities announced plans for four nuclear power plants with a total capacity of 4,005,000 kilowatts. Reactor suppliers have been selected for three of these plants and for two announced in 1968.

The status of nuclear power plants, as of September 30, 1970, is:

	Kilowatts
17 operable	5,773,700
54 under construction	43,843,900
38 planned (reactors ordered)	37,071,000
9 planned (reactors not ordered)	8,051,000

TOTAL 94,739,600

The AEC's three gaseous diffusion plants in Oak Ridge, Paducah, Ky., and Portsmouth, Ohio, produce the enriched uranium fuel for nuclear power plants in this country and abroad.



## Awareness House Is Proposed To Ease Drug Abuse Problem

When there's a community problem to solve, Oak Ridgers characteristically pitch in to find a solution.

In recent months a growing number of drug-abuse incidents has stirred deepening concern in the community. Then, dramatically, in an October poll at Oak Ridge High School, about 18 percent of the student body—almost one in five—admitted experimenting with drugs. Worse yet, some school officials fear that actual use is much higher than the total indicated by the poll.

The problem was no longer hypothetical, and something needed to be done—soon! The result throughout the Oak Ridge area has been growing support for "Awareness House, Inc." a proposed youth center with a specific commitment to preventing and eliminating drug abuse.

### Campaign Underway

During the past few weeks, an intensive information and fund-raising campaign for Awareness House has been conducted throughout Oak Ridge, apparently with three general goals—inform people of the problem, raise human and financial resources to solve it, and then start a continuing program to prevent and eventually eliminate the drug problem for the Oak Ridge community. All phases, particularly the first two, are now well on the road.

Basically, the Awareness House program offers an alternative to drug use for young people, but it is not for drug users only. Absolutely no drugs will be permitted on the premises. Instead, visiting young people and adults will have an opportunity to develop better relationships, with the center serving as a place for youth

to escape loneliness and boredom and as a resource for community groups needing speakers or information about drugs.

For troubled youth, trained counselors would always be available—24 hours a day, 7 days a week—at the center. The counselors, often ex-users, would have training in group work, community leadership, and in crisis intervention by the national training center for Awareness House in Tucson, Ariz. They will be selected because of an ability to respond to the needs of young people.

### Help at No Cost

The Oak Ridge Awareness House will not be a franchised operation. The local group would draw, at no cost, on the knowledge and experience of the larger Awareness House operations, particularly those in Tucson.

Funds currently being raised would pay the salary for counselors, for a car, and the rental and supply costs for the House. Although the public response has been generous so far, more money is still needed to finance the first year's operation. Checks may be made payable to "Awareness House of Oak Ridge, Inc." and mailed to Post Office Box Q, Oak Ridge, Tenn. 37830.



**GETTING UNDERWAY**—Some months ago, Oak Ridge school superintendent Homer Mincy called together a group of concerned citizens—later called the Youth Committee—to study the drug problem. Their activities led to the proposal of an Awareness House for Oak Ridge. Shown here are several persons discussing the program after a recent meeting sponsored by the Youth Committee and the Oak Ridge High School PTA. Alvin M. Weinberg, upper right, is serving as chairman of the finance committee for the project.

## ORNL's W. L. and Liane Russell Use 'Mouse House' Well

By Glenn T. Seaborg

A six story building inhabited by 160,000 mice represents a valuable source of information for scientists who are examining the effects of radioactivity on animals at the Atomic Energy Commission's Oak Ridge National Laboratory.

For 20 years, Dr. William L. Russell and his wife, Dr. Liane

Russell, have made constructive use of the residents of the "Mouse House."

Their examinations of 49 generations, or more than two million mice, have laid the foundation for much of our present knowledge about the effects of radiation—both on the animal exposed and his offspring.

The studies have yielded many answers to questions concerning the genetic effects of exposure to certain types of radiation. Early



Dr. Seaborg

results of the Russells' experiments indicated that the rate at which radiation is received is significant to a determination of its effects. A steady low dose of radiation, for example, is not as damaging as the same total dose received at one time.

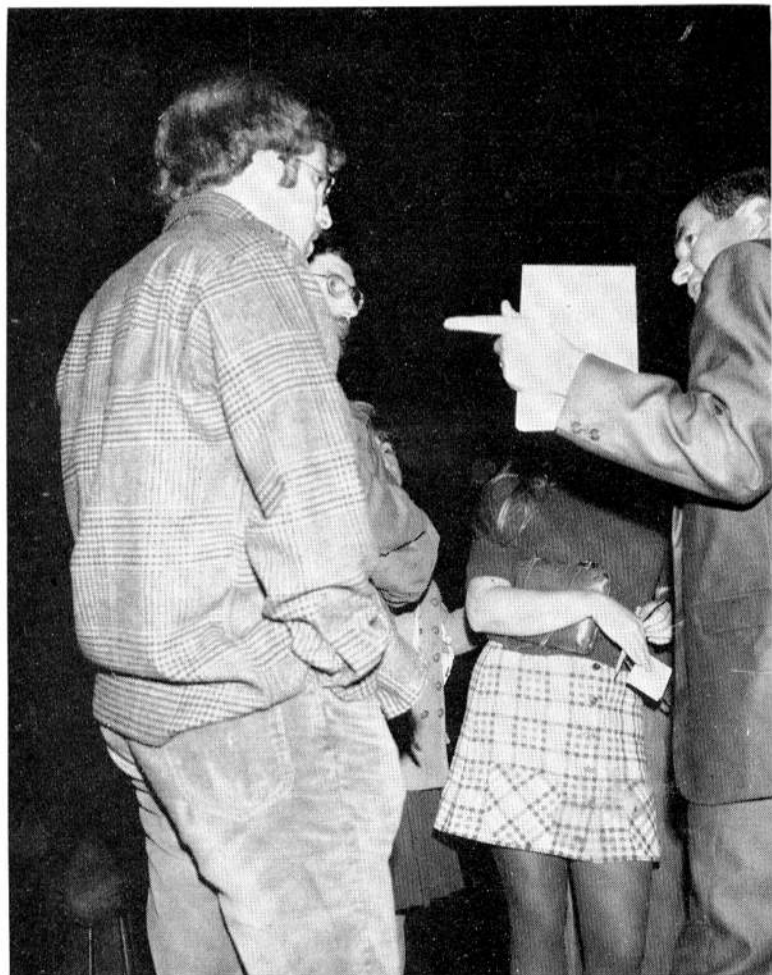
The Oak Ridge Laboratory's "Mouse House" program has also shown that mammals are much more sensitive to radiation than insects. And recently the Russells demonstrated that mice may have a built-in mechanism for repair-

ing radiation damage to their genes.

Some studies have turned up rather surprising results. For instance, we've learned that male mice for some reason are more easily affected by chronic radiation than are females. Others have verified what we always expected, for example, the fact that young mice are more sensitive to radiation than are adults.

Because of useful natural traits, the nuclear research pro-

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**MAKING A POINT**—Here Bryce Brooks, at right, emphasizes a point about drug problems with some of the persons discussing Oak Ridge's Awareness House. Brooks began the first Awareness House in Tucson and visited Oak Ridge recently to describe his highly successful program, which has served as a model for similar operations throughout the country.

### Long Week-End For 1971 Holidays

Two holidays will fall on "untraditional" days during 1971 for Nuclear Division employees. George Washington's birthday will occur on the third Monday in February and Memorial Day will fall on the last Monday in May.

The new law was actually written for federal employees to enable them to enjoy long week-end holidays. Other days specified to be changed for the employees were Columbus Day, the second Monday in October; and Veterans Day, the fourth Monday in October.

Holidays (all 10 of them) Nuclear Division folks will observe in 1971 are as follows:

New Years Day	January 1
Washington's Birthday	February 15
Good Friday	April 9
Memorial Day	May 31
Independence Day	July 5
Labor Day	September 6
Thanksgiving	November 25
	26
Christmas	December 23
	24

## FAMOUS ATOMIC SCIENTISTS



1917—WITH DR. OTTO HAHN, ANNOUNCED THE DISCOVERY OF THE RARE RADIOACTIVE ELEMENT, PROTACTINIUM



**LISE MEITNER** 1878-1968  
AUSTRIAN-BORN PHYSICIST—PURSUED THEORY THAT ATOMS WERE SOLID, UNSPLITTABLE LUMPS—AND WITH BETA RAY STUDIES BEGAN PIONEERING IN SPLITTING THE ATOM. AFTER EARNING A PH.D. AT UNIVERSITY OF VIENNA, SHE WENT TO GERMANY TO WORK AT THE INSTITUTE OF THEORETICAL PHYSICS. 1926—NAMED PROFESSOR EXTRAORDINARY AT UNIVERSITY OF BERLIN, AND HELD POST UNTIL HITLER CAME TO POWER. 1938—FLED TO SWEDEN AND AIDED O.R. FRISCH ON RESEARCH LEADING TO THE DISCOVERY OF NUCLEAR FISSION. A HATER OF ALL VIOLENCE, SHE KNEW NOTHING OF THE DEVELOPMENT OF THE ATOMIC BOMB. 1966—SHARED A.E.C.'S FERMI AWARD WITH DR. HAHN AND PROF. FRITZ STRASSMAN, THE FIRST WOMAN TO GAIN THE HONOR.



## Driving and Parking Safely Depend Strictly Upon You!

(Editor's Note: The following essay was written by Y-12's Safety Department. It outlines efforts being made to make traffic a little safer, a little more bearable for all of us.)

Union Carbide has always been greatly interested in employee safety both on and off the job; and in fulfilling this responsibility, adequate parking facilities are provided and maintained on adjacent plant property. As you know, there are six parking lots located conveniently to your place of work. The Company is not responsible for damage or loss to your car, or for theft of articles left in your car, or for your personal safety on these facilities. However, there is a continuing effort on the part of plant management to improve both the safety and effectiveness of traffic flow in and out from the plant parking lots and Bear Creek Road. There is more improvement forthcoming in upgrading our traffic signals at all intersections in and out of the parking lots.

There is sufficient parking at

all lots to accommodate all employees parking properly — that is, in marked-off lanes. The designed capacity of parking lots is as follows:

East and New Hope	649
North Portal	1,389
Central	818
West (both levels)	925
Pine Ridge	719
Bear Creek (East and West)	740

5,240

The estimate of capacity of Bear Creek Road for traffic flow is approximately 100 cars per minute, so that in less than 30 minutes we have the capacity for moving, conservatively, over 3,000 cars out of six parking lots onto Bear Creek Road and onto the area highways. Actual traffic counts provide a favorable indication that the traffic plan is working quite efficiently. Numerous plans have been formulated, and various traffic patterns have been established in the past, for improving traffic flow and parking. The physical condition of the lots has been reviewed on many occasions by Y-12 Safety, Maintenance, and Engineering personnel as well as outside traffic consultants. Many improvements have been made as a result of these reviews. Included in these improvements were the provision of additional parking spaces, improved lighting, installation of more traffic signs, painting of directional

(Continued on Page 4)

### BADGE SWAP

Y-12ers will exchange their badges early this month. New blue-bordered badges go up December 23, and will remain in the self-service racks at the portals-of-entry through January 7.

Employees are asked to pick up their new badges and place the old one in the same slot.

## Funeral Rites in Niota For Utilities' B. Edgmon

Mr. Bernard E. Edgmon, Utilities Administration, died at his Niota home December 2. He came here December 31, 1958, after working with the Athens Plow Company, Athens; and the Judith



B. E. Edgmon

Hosiery Company, Niota. He was a native of Kingston.

Survivors include his wife Mrs. Gona Valentine Edgmon, at home; a son Bernard E. Edgmon, Jr., Ft. Hood, Tex.; his mother Mrs. Arla Edgmon, and sister Mrs. Joe Brakebill, also of Niota.

Funeral services were held December 4 at the East Niota Baptist Church, Revs. Floyd Davis and Hubert Grubb officiating. Interment followed in McMinn Memorial Gardens.

### SAFETY SCOREBOARD

The Y-12 Plant Has  
Operated  
30 Days Or  
1,375,000 Man-Hours  
(Unofficial Estimate)  
Through December 13  
Without A Disabling Injury  
SAFETY AT HOME,  
AT WORK, AT PLAY

## Clowers, Llewellyn, and Melendez Named New Foremen at Y-12 Plant

Three additional Y-12ers are named in recent promotions. The Utilities Department has promoted Eugene Clowers and John E. Llewellyn to utilities foreman. Amado J. Melendez has been named a process foreman in the Metal Preparations Division.

Eugene Clowers is a native of Oliver Springs, and lives there presently at Route 3.

He came to Y-12 September 9, after working with the Windrock Coal and Coke Co., Windrock, for most of his life.

Mrs. Clowers is the former Margaret Giffin, and they have three sons, John, Michael and Jerry.

### John E. Llewellyn

John E. Llewellyn was born in the Solway community. He came to Y-12 September 30, 1953. He was in the Army from 1944 until 1946. Prior to that he was a security guard with Roane-Anderson. He went back with them after service, and worked with the Atomic Energy Commission as a patrolman from 1947 until coming here.

Mrs. Llewellyn is the former Marie Mills. They live at Route 20, Ball Road, Knoxville. They have two sons, William and Robert . . . and three grandchildren.

### Amado J. Melendez

A native of Myrtle Grove, La., Amado J. Melendez came to Y-12 July 6, this year, after working briefly with Union Carbide in Taft, La.

He attended Louisiana State University, and was in the U. S. Army from 1964 until 1967.

Mrs. Melendez is the former Kathy Adams and attends UT where she is studying special education. She hopes to teach deaf children. They live at 2521 Kingston Pike, Knoxville.



Eugene Clowers



John E. Llewellyn



Amado J. Melendez

### 'Fire' Film

Y-12 now has a new technical motion picture film to assist the Nuclear Division in fire safety planning. The film, entitled "Sprinkler Demonstrations on Reactive Materials," is 23 minutes long, sound-narrated and in color.

It was filmed at Y-12 by photographers W. N. Shipley and C. W. Bandy under the technical direction of fire safety engineer J. R. DeMonbrun of Shift Superintendents Division and L. M. McLaughlin of Development Division. Scripting and final editing were performed by R. L. Wesley, Technical Information Services. H. P. Templeton of Technical Information Services provided art work for the film.

DeMonbrun said he expects the film to have heavy use. Within the first two days of its arrival from the developers, the film was shown 17 times to different local groups of fire and safety personnel, production supervisors, representatives from Development and Engineering divisions and top management. He said that a number of other plants within the AEC complex have requested to borrow the film to assist in fire safety planning. A few additional copies of the film are on order.

A good teacher winds up his students so they won't run down. A good student requires little winding.

## Indoor Pistol League

The Carbide Indoor Pistol League fires its rounds at 6:30 and 8:30 p.m. Tuesdays at the Oak Ridge Sportsmen's Association, Oak Ridge.

Carbiders interested in joining should contact John DeLucia, extension 3-1670, or the Recreation Director at ORNL, extension 3-6723.



**GRADUATING APPRENTICES**—Ten Union Carbide Nuclear Division apprentices received journeyman status recently in a concentrated two-year program. The training consisted of work and study in computer technology, numerical control and standards laboratory procedures. The Y-12 men also learned to repair a variety of instrumentation, circuit-wiring and advanced electronics maintenance. From left, in the front row, are Charles E. Robinson, a member of the general apprenticeship committee representing the Atomic Trades and Labor Council; Jesse McDonald, Fred C. Douglas, Robert W. Byas, and J. W. Ebert, Superintendent of the Maintenance Division. In the second row are Bobby E. Weaver, Edgar C. Chaffin, Jr.; William F. Craft, Charles T. Eldridge, Larry E. Barnett and Robert C. McGuffin. Not pictured is Jack W. McNew, who also graduated from the apprentice training. Six of the new journeymen are graduates of the Training and Technology Project — McDonald, Douglas, Byas, Weaver, Chaffin and Barnett.





EIGHT POINTER—W. H. Borum, Assembly, proudly displays his eight-point, 126-pound buck. Borum brought down the buck on the Catoosa area recently.

## Driving, Parking Safely

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markings, etc. The objective of all this effort and expense is to eliminate traffic hazards and to provide safe and more convenient flow of traffic for the safety and convenience of all employees.

The physical facilities of the parking lots are managed and maintained by the Company; however, the responsibility for traffic accident investigation (or other similar disturbance) in the parking lots as well as Bear Creek Road rests with the local law enforcement officers (AEC Patrol and the Oak Ridge police). Therefore, if a traffic violation, an accident, or incidents such as theft do occur, the same laws apply as on any public streets or highways. In this regard, the Plant Shift Superintendents' Office can assist employees in establishing contact with and requesting services of appropriate local authorities such as the Oak Ridge police.

None of us wants to be involved in a traffic accident at any time or place, so we should drive as though our life depended on it—it does! This same type of driving attitude should be demonstrated

as you journey the total route to and from your homes every day.

Each employee is expected to show a cooperative attitude toward fellow employees and visitors and use courtesy in entering, parking, and exiting the parking lots and in observing traffic controls on Bear Creek Road. Willful violation of parking regulations or other conduct which exposes fellow employees to hazard and inconvenience or in any way interferes with safe and orderly access and egress of the plant proper is of serious concern to everyone.

Our continued efforts are a requisite in making the parking lots and plant feeder roads safe. Your exercise of mature judgment in the operation of your car is the key to attaining our objective.

LET'S BOTH DRIVE SAFELY!

### MERRY CHRISTMAS!

Thursday and Friday, December 24 and 25 are official holidays for Y-12ers. No employee shall be required to work unless he is needed for continuous operation or security of the plant.



PERFORMANCE AWARD—K. G. Kahl, left, superintendent of the Fabrication Division, presents the Number 1 Safety Performance Award to General Foreman H. E. Cornell, who accepts the award on behalf of H-2 and F Area Machine Shops. The two shops comprise Safety Award Group Number 18. The last serious injury which occurred in these shops was on November 17, 1969. They operated over 100,000 man-hours without a serious injury. In the same period of time, they have incurred only 17 minor or first aid type injuries.



Toward - the - year's - end celebrants mark important dates with Union Carbide. Congratulations, Y-12ers!

### 25 YEARS

Edward R. Crass, ORNL Chemical Services, December 19.

Dillard D. Spangler, Buildings, Grounds and Maintenance Shops, December 20.

James K. Olmstead, Buildings, Grounds and Maintenance Shops, December 26.

Willie S. Arnold, Electrical and Electronics, December 29.

### 20 YEARS

Charles H. Oaks, Guard Department, December 16.

James M. McCloud, Building Services Department, December 18.

Raymond F. Phillips, Special Services, December 18.

Neil C. Parrish, ORNL Chemical Services, December 18.

Spencer B. Underwood, Utilities Administration, December 18.

Roy L. Forsythe, Graphite Shop, December 18.

Harold B. Smith, Buildings, Grounds and Maintenance Shops, December 18.

Kent D. Patterson, Cafeteria, December 21.

William K. Ament, Process Maintenance, December 21.

George R. Jasny, Engineering Division, December 22.

Joe J. Rupe, General Field Shops, December 27.

Andrew S. Peterson, ORNL Chemical Services, December 27.

Robert S. Chambers, Area Five Maintenance, December 27.

Paul E. Trent, Materials Engineering Development, December 27.

James B. Bridges, Materials Testing Support, December 27.

John P. Smith, Electrical Engineering, December 27.

Charles E. Davis, Dimensional Inspection, December 28.

Charles G. Treece, Electrical and Electronics, December 30.

### 15 YEARS

Alfred P. Brown, Material Transfer and Packing, December 19.

Robert S. Hayes, Alpha Five East Shop, December 28.

### 10 YEARS

Howard W. Schrader, Numerical Control Engineering, December 12.

## Rollmasters' Ladd Rolls Big 633 Scratch Series

The Rollmasters, thanks to some fancy Bill Ladd bowling (a 234 and 235 in the past couple of weeks), still keep a three-point lead in C Bowling.

Ladd rolled a 633 scratch series last week.

League standings follow:		
Team	W	L
Rollmasters	40	12
Rounders	37	15
Big Five	30½	21½
Parabusters	26	26
Purple Pygmies	25	27
Badgers	25	27
Anodes	25	27
Jaguars	24	28
Instrument Engineers	24	28
Fireballs	24	28
Sunflowers	21½	30½
Royal Flush	16	36

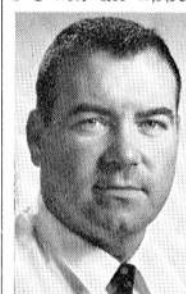
### STORE HOURS

Y-12's Union Carbide company store is located at North Portal, featuring consumer products produced by our company.

The sales, to employees only, feature hours on Monday, Wednesday and Friday from 4:30 to 5:30 p.m. On Tuesday and Thursday the store is open from 3 to 4 p.m.

## Y-12's Jack Johnson Dies Of Sudden Heart Attack

Mr. Jack Johnson, whose promotion was announced in the last issue of the paper, died December 5 from an apparent heart attack.



Johnson

Vicki and Michael.

Other survivors include his mother, Mrs. Cecile Hurtt, Production Analysis; and a brother, Joe, in Product Engineering. Another brother Jerry, survives in Clinton, and a grandmother, Mrs. Bessie Stone, LaFollette, also survives.

Funeral services were held December 8 in the chapel of Weatherford Mortuary, with the Rev. Kyle R. Tomlinson officiating. Burial was in Anderson Memorial Gardens.



Ride wanted or will join car pool from Sutherland Avenue, Knoxville, to Bear Creek or Pine Ridge Portal, straight day. Karen Thompson, plant phone 3-7178, home phone Knoxville 588-8472.

Riders wanted from Deane Hill, Kingston Woods, Gulf Park, Belmont West, Cedar Bluff Road, area Knoxville, via Middlebrook Pike, to any portal, straight day. Jim George, plant phone 3-7277, home phone Knoxville 588-6474.

## Raiders Raid Starlite Bowlers of 1st Place!

The Raiders took over the top spot in the Carbide Starlite Bowling League last week after sweeping wins over the Comets and the Woodpeckers in a row.

J. Kirkpatrick stirred the pins last week with a 223 game . . . J. Hensley the week before with a 242!

The Woodpeckers rolled games of 2050, 2431 in series count on December 3.

League standings follow:		
Team	W	L
Raiders	30	9
Mix-Ups	29	10
Wildcats	23	16
Woodpeckers	23	16
Marauders	22	17
Latecomers	22	17
Pin Boys	18	21
Comets	16	23
Splitters	8	31
Rollers	4	35

## Rose 'n Thorns 'Needled' By Twisters for Top Spot

The Mixed Bowling League got new leaders last week as the Twisters tore into the former leaders the Roses 'n Thorns, demolishing them for the full count. They stay one point in the lead, with this week remaining on the first half schedule.

The Rollers' C. R. Lively posted a 227 game last week for high honors.

League standings follow:		
Team	W	L
Twisters	33	19
Roses 'n Thorns	32	20
Rollers	28	24
Hits & Misses	27½	24½
Goofers	26	26
Friskies	23	29
Cougars	19½	32½
Alley Cats	19½	32½

## Coffey Son Given Air Medal Citation



Sgt. John W. Coffey

Army Sgt. John W. Coffey has been awarded the Air Medal for meritorious achievement while serving with the First Air Cavalry Division in Vietnam.

Assigned to the 11th Combat Aviation Group of the First Air Cavalry Division, at Camp Gorvard, Phuoc Vinh, South Vietnam, Sgt. Coffey "distinguished himself by meritorious achievement, while participating in sustained aerial flight, in support of combat ground forces in the Republic of Vietnam," according to the citation. "He brought credit upon himself, by this determination to accomplish his mission, in spite of the hazards inherent in repeated aerial flights over hostile territory."

A graduate of Lenoir City High School, Coffey also is a graduate of the Knoxville Area Vocational and Training School where he received a drafting certificate. He was employed by the Rochat Heating and Air Conditioning Co., Knoxville, before entering service in February of last year. He took basic training at Ft. Campbell, Ky., and was last stationed at Ft. Polk, La., before his Vietnam assignment.

He is the son of Mr. and Mrs. Winston C. Coffey, Lakeside Drive, Lenoir City. His father is in Research Services in Y-12.

Sgt. Coffey is married to the former Debbie Hall, also of Lenoir City.

## Markers Move Forward In Classic League Race

The Classic Bowling League got new leaders last week as the Markers moved into the magic slot with a one-point lead.

Walter Joest, All Stars, rolled a hot 266 game last week . . . while Jack McLendon, All Stars, put a 246 on the books the week before. Dave Smith, Playboys, rolled a 707 handicap series while his team danced through with a 3074 handicap series last week.

League standings follow:		
Team	W	L
Markers	38	18
Swingsters	37	19
All Stars	32½	23½
Bumpers	31	25
Eightballs	30	26
Rebels	30	26
Has Beens	29½	26½
Splitners	29½	26½
Rojos	29	27
Rippers	28	28
Playboys	27	29
Tigers	23	33
Smelters	22	34
Cubs	21	35
Screwballs	20½	35½
Eagles	20	37

## NEWS

Published Bi-Weekly For The Employees Of  
UNION CARBIDE CORPORATION  
NUCLEAR DIVISION  
JAMES A. YOUNG ..... Editor



# THE CARBIDE COURIER

Thursday, December 17, 1970

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**COMPLETE TRAINING COURSE**—Five employees at the Oak Ridge Gaseous Diffusion Plant recently completed the operator training course being conducted by the Operations Division. The course includes 15 months of classroom and on-the-job training in the skills required to operate the many different types of equipment used in the gaseous diffusion uranium isotope separating process. Presenting the Achievement Awards from left is R. H. Dyer, Cascade Operations Department Head. To his left are recipients C. J. Tate, R. E. Collier, B. P. Duncan, B. D. Underwood and C. A. Anderson. L. J. Davis, training coordinator is at the right.

## November Uranium Shipments

The Oak Ridge Gaseous Diffusion Plant shipped approximately 220,000 pounds of enriched uranium during November for use in nuclear reactors.

The uranium, which was enriched at a charge of more than \$10.9 million, filled orders authorized under two Atomic Energy Commission programs — Toll Enrichment and "Lease and Sale."

Under the Toll-Enrichment Program, approximately \$6.9 million worth of separative work was performed for customers in Japan, Switzerland and The Netherlands, as well as in the States of Illinois, Maine and Wisconsin.

Customers are charged for the services required to separate from natural uranium the desired percentage of the uranium-235 isotope, which is the fissionable material used in nuclear reactors.

Under the "Lease and Sale" program, reactors in Switzerland, and the States of Connecticut, Maine, Michigan, New York and Vermont received government-owned uranium valued at approximately \$3.9 million.

## THE CARBIDE COURIER

Published Biweekly  
Editor ..... H. J. Mayberry  
K-1002 Building, Tel. 3-3097



**PATENT APPLICATION**—Ralph M. Delozier, right, Machine Design Engineering Department, recently received his patent application award from F. S. Patton, superintendent of the Engineering Division. The title of his application is 'Tube Processing Machine.' Delozier has been in our Engineering Division since 1949. This is his second patent application.

## 'DRUNK' Test

Tennessee State Troopers recently began enforcing the state's implied consent law with the use of the Sober Meter Balloon test. State Safety Commissioner Greg O'Rear said every trooper was equipped with an ample supply of the balloons and the new program was now in effect statewide.

He praised the new method of checking a person's sobriety saying "It was not only a time saver but it also supplied evidence to present in court." Commissioner O'Rear said any licensed driver that had given a trooper reason to believe he was under the influence of an intoxicant would be asked to take the balloon test. If the test revealed that the motorist's system contained enough alcohol to measure 0.10, he is presumed under Tennessee law to be under the influence of an intoxicant.

The Commissioner said it is also important to remember that a motorist will automatically have his driver license suspended if he refuses to take the test, whether or not he is convicted of driving while under the influence of an intoxicant. Commissioner O'Rear said, "The drinking driver is always a problem to State Troopers and a dangerous threat to other motorists. We feel that the Sober Meter Balloon test is another vital step toward getting these careless irresponsible people off our highways before they can cause a deadly accident."

## MERRY CHRISTMAS!

Thursday and Friday, December 24 and 25 are official holidays for K-25ers. No employee shall be required to work unless he is needed for continuous operation or security of the plant.

## Fabrication, Maintenance Div. Names Johnson Foreman, Effective December 1

Winfred Henry Johnson was promoted on December 1 from a supervisory trainee to a custodial foreman in the Janitors Department, Fabrication and Maintenance Division. He has been employed by Union Carbide since January, 1967, first at ORNL and then transferred to K-25 in September, 1968. Prior to his Carbide employment, he was assistant athletic director in the Tennessee State Corrections Department and, before that, had worked as a construction foreman for H. K. Ferguson and Rust Engineering. He served two years in U.S. Army Communications in Korea, attaining the rank of sergeant.

Johnson was born and attended public schools in Morgan County. He is married to the former Eleanor Wormsley from Coalfield and they have two children, Erice and Starlett. Johnson's outside interests include participant sports, especially softball and basketball. The Johnsons live in the Coalfield Community of Morgan County.



W. H. Johnson

## Operations' Ladd Dies In Harriman Hospital

William Herbert Ladd, 61, died suddenly in the Harriman Hospital on Monday, December 7, following a short illness. He was an operator in the Chemical Operations Department of the



W. H. Ladd

Operations Division and had been employed by K-25 since October, 1944. Before coming with us, he had worked four years for Alcoa and had been in the grocery business for himself. Ladd was born and completed public schools in Kingston. He is survived by his wife, the former Gertrude Johnston, also from Kingston, and a daughter, Carol Ann. The Ladd home is on Gallaher Road.

## What Can I Do About Pollution?

We have all read the alarming facts about how the quality of our environment is deteriorating at an alarming rate. Winnie Human, secretary to E. C. Evans, Separation Systems Division, brought us this excellent article from the National Wildlife Magazine.

**Question:** "But what can I do about it?"

**Answer:** Plenty. Because the biggest polluter of all is YOU.

Automobiles cause most of our air pollution. Who drives them? YOU!

More than half of the phosphate pollution in our waters comes from foamy household detergents. Who has quit using old-fashioned soap? YOU!

Who throws away 28 billion bottles and 48 billion cans each year? YOU!

(Continued on Page 4)

## Auto Headlights Added Protection

State Safety Commissioner Greg O'Rear said recently that many motorists are violating Tennessee's new Headlight Law. Commissioner O'Rear said the law was amended during the last session of the General Assembly to require the use of headlights during fog, smoke, or rain, and all other times where there is not sufficient light to clearly see a person on the road at a distance of 200 feet ahead of their vehicle. The law also requires that headlights be used during the period from one-half hour after sunset until one-half hour before sunrise. He said poor visibility has caused many accidents during these periods which could have been prevented if headlights were in use. Headlights are not only good for your own visibility; they also aid other motorists in seeing your vehicle.

The Commissioner asked all motorists to voluntarily comply with the law.

Too many times recently, east-bound employees, from K-25, have not been using their headlights as required by law. Add to the poor visibility the car colors (black, green/blue shades) which blend into the background. Employees could be reminded to be aware of oncoming drivers who flash their lights; they could be trying to say "for safety's sake, turn on your lights!"

## Tuesday League

Dick McCulloch and Martin Ginsburg shared Bowler-of-the-Week honors in the December 1 kegling of the Tuesday League. McCulloch had the best single game with a 212-243 score and Ginsburg had high series scores of 552-621.

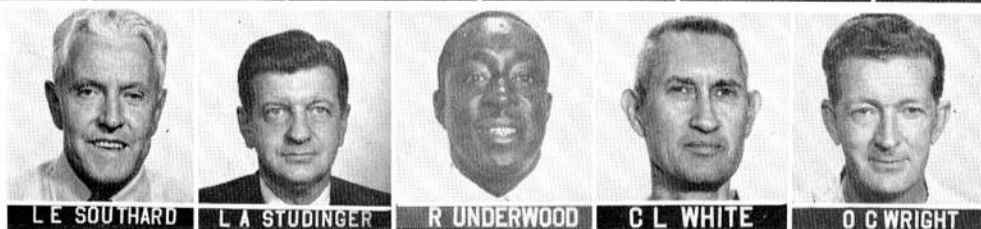
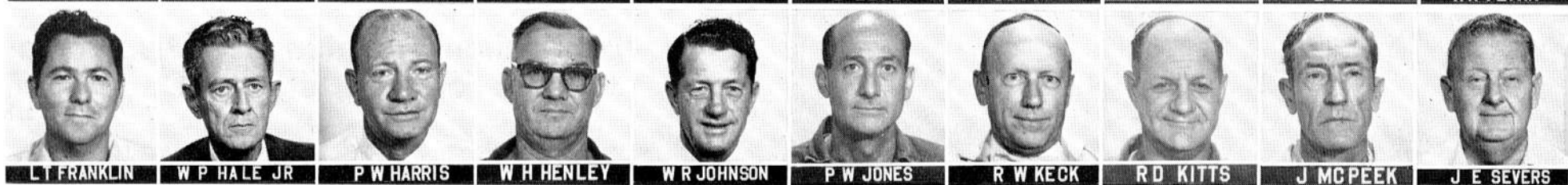
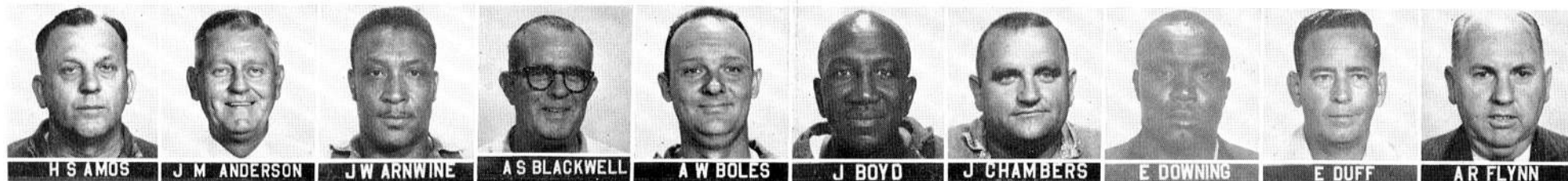
Only two points separate the top four teams, it's any team's race so far.

## Standings

City Slickers	31	Atoms	29
All Stars	31	Possibles	24
Double X	30	Full House	11



# These Employees Reach 25 Years Service This Month



## Women's Bowling

Mary Foley and Mary Ruth Hawkins were the Bowlers-of-the-Week in the November 24 session of the K-25 Women's League. Mary rolled a 233-254 single game and a 526-589 series. Mary Ruth tied for handicap series, also had a 589 total.

Eileen Walbrecht and Mary Foley again had the best scores in the December 2 pin tumbling. Eileen's handicap scores were 241 and 533, Mary's scratch scores were 202 and 533.

### Standings

Up-Towners	32	Bowlettes	21
Pay-Offs	30	Pin-Ups	19½
Hot Shots	25	Hits Misses	12½
Wood Bees	24	Spotters	12

Want to be popular? Learn to yawn with your mouth closed and your eyes open.

## Wednesday

## Bowling League

Ernie Bogle took individual honors in the November 18 session with a 232 handicap game and a 638 handicap series. This league did not bowl on Thanksgiving Eve.

Po Smith and Don Burton shared Bowler-of-the-Week honors in the December 2 rolling. Po had a 248 handicap game and Don had a 645 handicap series.

The battle for first place continues. The Pirates overcame a big lead which the Demons had at one time and after the last session, have a one-point lead.

### Standings

Pirates	33	Planners	24
Demons	32	Mix-Ups	22½
Amps	26	Freezers	15
San'b'gers	25½	Rookies	14

## What Can I Do?

(Continued from Page 3)

We could go on and on and on . . .

First step in curing an alcoholic is for him or her to confess, "I am an alcoholic." First step in curing pollution is for each citizen to say to himself, loud and clear: "I am a polluter." Then, and only then, are you ready for the next question, "What can I do about it?"

**The individual counts.** Here are some things you as an individual can do:

1. For short distances, walk or ride a bus. Use public transportation instead of your car when possible.
2. If you must drive, buy a small car.
3. If you commute, fill your car. One car carrying four persons spews out only 25 percent as much pollution as four cars carrying only one each.
4. Tune up your car. Demand lead-free gas.
5. Refuse to buy detergents; go back to non-polluting laundry soap.
6. Refuse to buy throwaway bottles or cans when possible.
7. Take your own reusable "tote bag" to the store. Cut down on use of paper bags and wrapping paper.
8. Refuse to buy colored tissues—the dyes pollute the water.
9. Stop flushing garbage down sink disposal—it adds to already heavy organic load at disposal plant.
10. Use less electricity. Turn off excess lights. Power plants are big polluters.

### SAFETY SCORE?

Do you want to know how we are doing on our current safety record? It's very easy—simply pick up the phone and dial 3-3449. The automatic answering service will give you the present disabling injury free hours along with the weather report and a short safety message. Remember the phone number, 3-3449.

### SAFETY SCOREBOARD

OUR PLANT  
Has Operated  
**1,360,000 Safe Hours**  
Through December 10

Since last disabling injury on August 31

## Lab Notes



**FLOWER DESIGNING**—Georgia Bailey, wife of J. C. Bailey, will present a 36-hour course in flower designing in Oak Ridge.

Georgia Bailey, the wife of J. C. Bailey of the Physical Measurements, Inspection, and Nuclear Technology Department, presents the Flowers of Design School in Oak Ridge, Tennessee. The purpose of her school is to teach one to be artistic with plant material—flowers and foliage. Flowers by Design is a 36-hour course covering the techniques of traditional flower arranging. Included in this study are mechanics, conditioning, basic design, creativity, placement of designs, push 'n pull method, color exercises, and flower knowledge. Additional instruction is available for the professional field.

Mrs. Bailey has received congratulations on her work from J. H. Walker, Executive Director, Society of American Florists, Washington, D.C. She has also

been featured regularly on Mary Starr's Homemaker Show on the WATE television station in Knoxville, Tennessee. She says that flower designing can be a rewarding experience and lead to many wonderful ways of enjoying nature and art.

\* \* \*

J. C. Barton, Superintendent of the Laboratory Division, attended the 43rd meeting of the United States Atomic Energy Commission Technical Information Panel in Oak Ridge on December 1, 2, 1970. The Panel is sponsored by the Division of Technical Information in Washington, D. C. Members of the Panel represent AEC contractors throughout the United States. Barton represents ORGDP, Paducah, and Y-12 on the Panel.



**A DEER EACH**—The Hilemon brothers each got a deer recently with a bow and arrow. The sons of C. H. 'Lefty' Hilemon, Electrical Engineering, they bagged a doe each in the junior hunt on Central Peninsula Wildlife Management area. At the top is Paul with his 80-pound doe and at the bottom is Eric with his 56-pounder. They both used 48-pound bows.



## Early Retirements Growing

By T. A. LINCOLN, M.D.

An ever-increasing number of working men and women are taking an early retirement. Not too many years ago, work was considered its own reward. It gave a person a sense of self-satisfaction to be contributing, even if in a small way, to the productive needs of society. Has that changed? Why should more people seek early retirement when they are still in reasonably good health?

Dr. James Morgan and Richard Barfield of the Survey Research Center of the Institute for Social Research of the University of Michigan have been conducting attitudinal surveys on this subject for the past seven years. Between 1963 and 1968, there had been about a 10 percent increase in the proportion who planned to retire before age 65 and now in the 35-to-54 age group, over one-third plan to retire early. Twenty-six percent in the 55-to-65 age group plan to retire early.



Dr. Lincoln

In their monograph, *Early Retirement, the Decision and the Experience* (University of Michigan 1969), Morgan and Barfield indicate that Americans are generally optimistic and look forward to retirement. Because of the current rapidly rising cost of living and the stagnant economic picture, the national attitude may have changed slightly since the publication of this book. Nevertheless, these authors report that an overwhelming majority believe that they will be better off when they retire.

### Some Feel 'Obligation'

Seventy-five percent of those surveyed expected few, if any, financial problems after they retired. Forty percent felt that if a person could be reasonably secure in a retirement, he had a "moral obligation" to retire early and make room for young people who need to find jobs. About 60 percent look forward to retirement as a time of leisure and contentment. Only about one-third were skeptical and perhaps concerned about boredom.

In the national sample in 1966, 3,647 family heads of all ages living in 48 different states in 12 of the largest metropolitan centers and 66 other areas were interviewed. There were 1,652 between the ages of 35 and 59. Interviews were conducted in the home with the head of the family who was working. The interviews took about one hour. The 1966 family income was \$7,499 or less in 57% of the families; less than \$14,999 in 32% and over \$15,000 in 11%.

A separate survey of members of the United Auto Workers was conducted in Michigan, Ohio, Illinois, and Indiana. Using recognized techniques to select their sample, 1,336 members in the 58-to-61 age group were interviewed. The results were similar to the national survey.

### Finances Are Key

Their study indicates that the most important consideration in early retirement is financial. The amount of retirement income doesn't need to be large. The "threshold" level in 1966-67 was only \$4,000 per year. This amount has to be compared to the level of income a family could "enjoy" in the interim and the increased amount possible in benefits if the retirement were postponed another five or more years. Other economic factors of importance were the number of dependents, income from other assets and whether the mortgage was paid off.

The second most important variable was health. Many planned to retire early if they thought their health was in jeopardy. In a survey of a small sample of people already retired, many felt that retirement improved their health.

People who had active recreational interests such as hobbies, sports or travel, were more inclined to seek early retirement. Those who were dissatisfied with their jobs, who complained of the difficulty "keeping up" or an annoyance with rigid hours and long commuting times, tended to favor early retirement but the influence was not strong. A few felt mild pressure from their employer or their union but it required only "a little accommodating behavior." The worker's current



**NEW DISPLAY**—This new exhibit prepared by staff members at the Paducah Gaseous Diffusion Plant graphically portrays some of the advantages of nuclear power in meeting the world's growing energy needs.

income, education, occupation or whether or not he was a supervisor made little difference.

### 'Work Ethic' Declining?

The University of Michigan study and others suggest that the "work ethic" is declining in American society. Fewer and fewer people find major personal satisfaction in their jobs. Most production plants have become highly automated and the worker therefore has little sense of making a discrete contribution to a specific product. He no longer can stand back and say, "I made that!" In the recent UAW negotiations, many workers expressed extreme dislike for their work and an urgent desire to be able to leave after 30 years, even though they were in their early fifties.

As the retired population grows, their increasing political influence will yield much better pension programs in industry. If these are not tied to increases in productivity, who will pay for them?

Maybe we are heading for a

## Nuclear Energy and Environment Subject of Display at Paducah

Everybody in the energy business talks about pollution problems, but the nuclear industry is making the most rapid progress toward solving them.

That's part of the idea of a new exhibit prepared by the Paducah Gaseous Diffusion Plant on the theme "Nuclear Energy and the Environment."

Designed primarily for use in major meetings, recruiting efforts, and civic exhibitions, the exhibit graphically portrays the role of atomic energy in "meeting tomorrow's energy needs today." It has already had several showings this fall.

A taped message and revolving

panel with three hand-painted illustrations depict world-wide growth in the use of electricity, the advantages of nuclear power in meeting increasing needs, and the relationship of the atom with the environment.

Other features included are scenes of commercial nuclear power plants; charts citing growth in the nuclear industry; and photos of employees at work at the Paducah and Oak Ridge, Tennessee, gaseous diffusion plants.

The exhibit focuses on the central mission of the gaseous diffusion plants — production of enriched uranium, the vital nuclear fuel that powers commercial nuclear power plants throughout the free world. Included in the display are a cross-section of a reactor fuel assembly and samples of uranium and other metals (to illustrate relative weights).



**CLOSE COOPERATION**—Carl Yearwood, the city's director of recreational activities at the Oak Ridge Civic Center, often works closely with Nuclear Division recreation directors. Shown here are, from left, E. W. Whitfield, Jr., Oak Ridge National Laboratory; Kenneth M. Steelmon, city; R. L. Cantrell, Y-12; Yearwood; and Shep Lauter, city. The new Center opened its doors last month.



# GBU's, Shoestrings, Untouchables Get Clean Basketball Slates in Openers

The 12-team Basketball League, pitting teams from Y-12 and K-25 in competition, opened last week with a resounding six games.

The James Gang, showing pretty good form for opening night, downed the Mod Squad 54 to 28. Hunter Foreman led the basket- teers with 14 through the bucket.

The Wild Bunch won a forfeit game from the Trojans.

## Randy Came Home

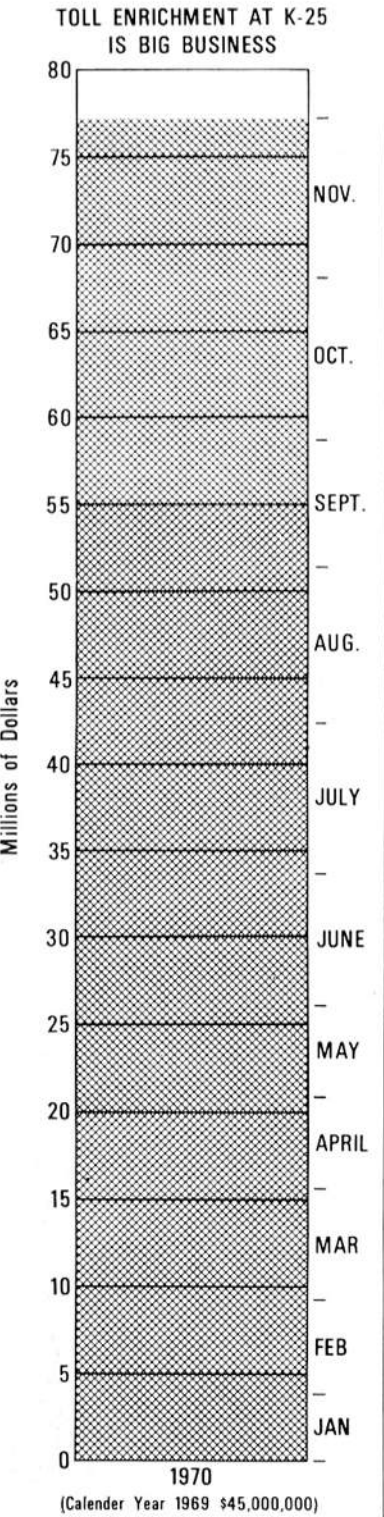
The GBU's, boasting big Randy Poole back home again in friendly territory, downed the CC 69ers 66 to 48. The tough team is going to be hard to handle with new strength in Poole, Defenderfer and Blumkins added to the al- ready talented squad.

The Shoestrings tied the Bottle- necks 67 to 23. They held the 'Necks scoreless in the fourth quarter.

The Untouchables squeaked by the Demons 45 to 43 in a close one, with Joe Keen leading scoring with 17 points.

Beta Two defeated the Hawks 62 to 49 in the final game Decem- ber 2.

The GBU's ran roughshod over the Wild Bunch 83 to 33 in last week's opening session. They out- gunned the wild ones from the opening gun. Gordy, Poole and McDonald dropped them through the basket with regularity, each scoring 20 points.



## Fast Break

The Hawks, after playing cold in the first quarter, came back to make a game of it with the Tro- jans, only to lose 68 to 47. Bill Painter entered the game in the second quarter, and scored 27 points to make the game a lot closer than it was when it started.

The CC 69ers demolished the Mod Squad 66 to 35, breaking away in the third quarter to prove their superiority. The 69ers used the fast break to their best ad- vantage.

The Shoestrings undid the Beta 2 team 64 to 52 last Thursday, as Jerry Brown again led the map- le-men on the floor. His 22 points led the pack.

Jim Young led scoring for Beta 2 with 15.

## Untouchables Win

The Untouchables won their game number two of the fresh season from the James Gang . . . 56 to 35.

Grant Hill led the scoring for both teams, helping the losing squad to stay in there. He tallied 16.

The Bottlenecks finished off the late action, winning from the Demons 53 to 26.

## League standings follow:

Team	W	L
GBU's, Y-12	2	0
Shoestrings, Y-12	2	0
Untouchables, Y-12	2	0
Wild Bunch, Y-12	1	1
Beta 2, Y-12	1	1
CC 69ers, K-25	1	1
K-25 Trojans	1	1
Bottlenecks, Y-12	1	1
James Gang, K-25	1	1
Mod Squad, K-25	0	2
Hawks, Y-12	0	2
Demons, Y-12	0	2

# 14 Volleyball Teams Open Play

The 14-team Volleyball League began action December 3, as the K-25 Hawks downed the Gooney Birds 15-1, 15-2 and 15-5. The Pack, ORNL, ousted the Y-12 Ea- gles 15-3, 16-14 and 15-5. The Set Ups skunked the AECOP's Foi- bles 15-1, 15-6 and 15-11. On Court B the Gang galloped past the Boomerangs 15-9, 15-1 and 15-9. The Radphys reduced the Y-12 Old Men 15-11, 15-2 and 15-7. The Quarks beat the Bombers 16-14 and 15-6. The Bombers won game number two 15-8. The Old Men, ORNL, defeated the Environmen- talists 15-5, 15-0 and 15-8.

Last week the ORNL Old Men marched past the Quarks 15-7 and 15-1; while the Quarks won game two 15-13. The Y-12 Old Men bombed the Boomerangs 15-2 and 15-5; while the Boomerangs took game two 15-13. The K-25 Hawks kept their record clean by over- coming the Set Ups 15-3, 15-11 and 15-4. The Radphys defeated the Environmentalists 15-4, 15-11 and 15-11.

On the other court the Pack pelted the Gang 15-7, 15-2 and 15-6. The Eagles easily won over the Gooneybirds 15-3, 15-3 and 15-1. The AECOP's Foibles beat the Bombers 17-15 and 15-9. The The Bombers took game two 17-15.

## League standings follow:

Team	W	L
The Pack, ORNL	6	0
Hawks, K-25	6	0
Radphys, ORNL	6	0
ORNL Old Men	5	1
Y-12 Eagles	3	3
Set Ups, ORNL	3	3
The Gang, K-25	3	3
Quarks, K-25	3	3
AECOP's Foibles	2	4
Y-12 Old Men	2	4
Bombers, ORNL	2	4
Boomerangs, ORNL	1	5
Gooneybirds, ORNL	0	6
Environmentalists, ORNL	0	6

He who is always late will al- ways have a good excuse. Still, he is always late.

# Pollution

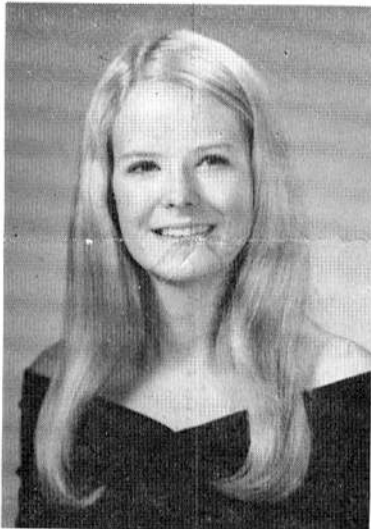
(Continued from Page 1)

wood, but adhere firmly to the wood chips.

After the "tagged" chips are released in the stream, investiga- tors collect water samples down- stream from the plant. The water sample is taken to a laboratory equipped with a nuclear reactor where it is made slightly radio- active. It is then analyzed to de- termine how much, if any, of the polluting material from the paper plant is contained in the stream water. The extreme sensitivity of the neutron activation analysis permits working with a solution ratio of 22 million to one.

The field tests, which are spon- sored in conjunction with the Northwest Pulp and Paper Asso- ciation, show that the tracing method is also effective in plant operations. The tagged material may be inserted and samples re- moved at any production stage to pinpoint material losses or leaks during production which could also cause pollution. Such losses sometimes run as high as 10 per- cent and are an economic as well as effluent concern.

No radiation is introduced into the plant processes, nor does the test interrupt the paper mill op- eration, the cost is nominal and normally requires only one per- son.



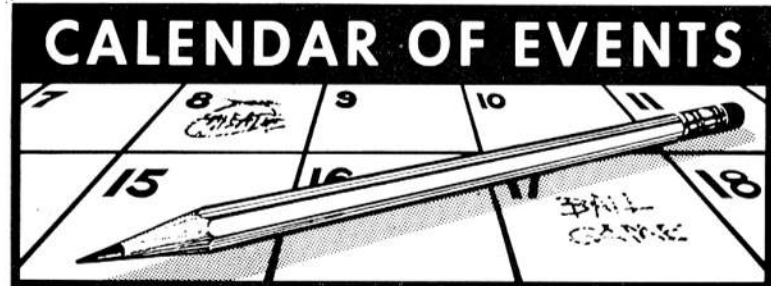
**PRETTY MISS**—Janet Harrel, daughter of Mr. and Mrs. H. A. Harrel, Jr., has been voted 'Miss Congeniality' by participants of the Oak Ridge 1970 Junior Miss Pageant. The pageant is an annual event spon- sored by the Jaycees. Janet's father is with the Atomic Energy Commis- sion Combined Operations Plan- ning (AECOP).



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## TECHNICAL December 18

Physics Division Seminar: "In- dian Institute of Spectroscopy— 1970," H. W. Morgan. East Audi- torium, Building 4500N, 3 p.m.

Biology Division Seminar: "Ge- netic Transfer of Salmonella Ty- phimurium Antigenic Determin- atants to Escherichia Coli," Ran- dall T. Jones, Stanford Universi- ty. First Floor Tower Annex Con- ference Room, Building 9207, 12:15 p.m.

## Welfare, Davy, Brewster Fire Top Skeet Scores

November Skeet highs went to Fred Welfare, ORNL, with a near- perfect 49.156 score. Bill Davy, ORGDP, came in close with a 48.575 second score; and Carl Brewster, Y-12, took third stand- ing with a 48.524.

The December shoot was set for Saturday, December 6, and will be reported in another issue of the **Nuclear Division News**.

## November firing scores:

Firer	H'Cap Score
Bob Allstun, Y-12	46.330
Leon Bray, Y-12	45.847
Carl Brewster, Y-12	48.524
Perry Bullard, Y-12	48.220
Jack Case, Y-12	48.085
Joe Comolander, Y-12	49.407*
Bill Davy, Sr., K-25	48.575
G. Kwiecien, ORNL	48.232
Bobby Powers, Y-12	47.403
Vern Raaen, K-25	48.302
Bert Searles, Y-12	47.706
Alan Van Hull, Y-12	47.863
Bill Weathersby, Y-12	49.461*
Fred Welfare, ORNL	49.156
Howard Rash, Y-12	47.877

Cancer Research Seminar: "Leu- kemia in the Hairless Mouse," David D. Myers, Jackson Labora- tory. Large Conference Room, Building 9207, 12:15 p.m.

## December 22

Mathematics Division Seminar: "On the Eigenvalue Problem  $Ax = \lambda Bx$ ," G. W. Stewart, Uni- versity of Texas, Austin. East Auditorium, Building 4500N, 10 a.m.

## COMMUNITY December 20

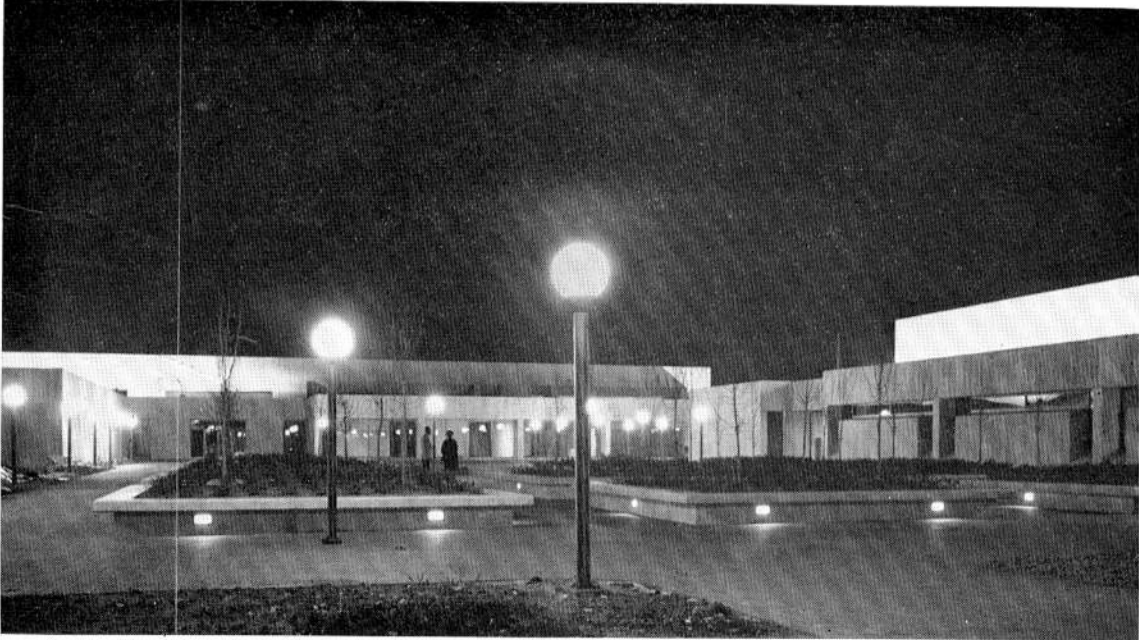
The Oak Ridge Art Film Club presents "An Evening with Laurel and Hardy." Jefferson Junior High Little Theater. Two show- ings, one at 6 p.m., the other at 8 p.m. Admission: Adults \$1; stu- dents \$.75.

## 'Mouse House'

(Continued from Page 2)

gram uses a great number of mice —at one time the AEC research laboratories across the country had nearly 800,000 mice and 100,- 000 rats. The mice at Oak Ridge alone consumed about two tons of food per day.

In many studies like these, mice and other animals are providing invaluable information about the effects of radiation. Because of their help, nuclear scientists and engineers can proceed with their research and development of nu- clear energy, confident about the safety of their work.



**CENTER PLAZA AT NIGHT**—Thousands of Oak Ridgers and others from the area are now enjoying night scene shows the lighted plaza at night. At top left and center is the recreation complex, and at right is the main library. It's getting a little cool for it now, but in warmer weather the Plaza will really come alive with activities such as outdoor dances and lecture series.